

In the Claims:

1 **1.** (Original) Apparatus for the determination of loads on
2 fiber composite components (1), especially of vehicle and
3 aircraft parts, whereby the components (1) is provided with
4 a prescribable number of sensor elements (3) for the
5 determination of strains, which are connected to an
6 evaluating apparatus (4), characterized in that the sensor
7 elements are embodied as strain gages (3) and are
8 integrated into the fiber composite component (1).

1 **2.** (Original) Apparatus according to claim 1, characterized in
2 that this is embodied as a testing or monitoring apparatus,
3 whereby at least two or a plurality of strain gages (3) are
4 integrated into the fiber composite components at
5 prescribed spacing distances, whereby the strain gages
6 detect strains caused by material stresses at least on the
7 damage relevant component surfaces and supply these as
8 electrical signals to a central evaluating apparatus (4).

Claims 3 to 12 (Canceled)

1 **13.** (Original) Sensor element for the determination of strains
2 in fiber composite components (1), which is embodied as a
3 strain gage (3) and consists of a conventional measuring

4 grid (5) with a carrier layer (6) and an upper cover layer
5 (7), characterized in that connecting pins (8) arranged
6 perpendicularly to the measuring grid (5) are provided as
7 electrical connection points, and that the upper cover
8 layer (7) of the foil strain gage (3) is embodied like the
9 carrier layer (6) thereof.

1 **14.** (Original) Sensor element according to claim 13,
2 characterized in that a strain relief (10) of the measuring
3 grid material is provided between the end points of the
4 measuring grid (5) and the connecting pins (8), wherein the
5 strain relief prevents a measured value falsifying
6 resistance influence of the supply lines in connection with
7 large material strains in the fiber composite material.

Claims 15 to 20 (Canceled).

[REMARKS FOLLOW ON NEXT PAGE]